Utah State Center of Excellence

New Center - YEAR 1 Proposal:

Center for Information Communication and Security

(CIX)

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Center for High Performance Computing (CHPC), University of Utah

Information Technology (IT) is a Mess

"... despite the trillion dollar per annum IT investment in the global economy, productivity in the richest 7 nations has precipitously declined on a historical basis"
Scientific American

"16% of IT projects have been considered successes"
and
"no correlation between IT spending and company performance"
Nicholas Carr, "Does IT Matter?", Harvard Business School Press, 2004

*"Most companies spend too much on IT and get very little in return"*
Larry Ellison, Oracle CEO

Why Corporate Intranets?

Communication:

- more and richer content
- more people
- faster
- **increase knowledge**, **assets**, **business**

Security

- protection from competitors
- protection from vandalism
- protection from undesired/unknown risks
- **decrease cost, losses and liabilities**

COMPANY
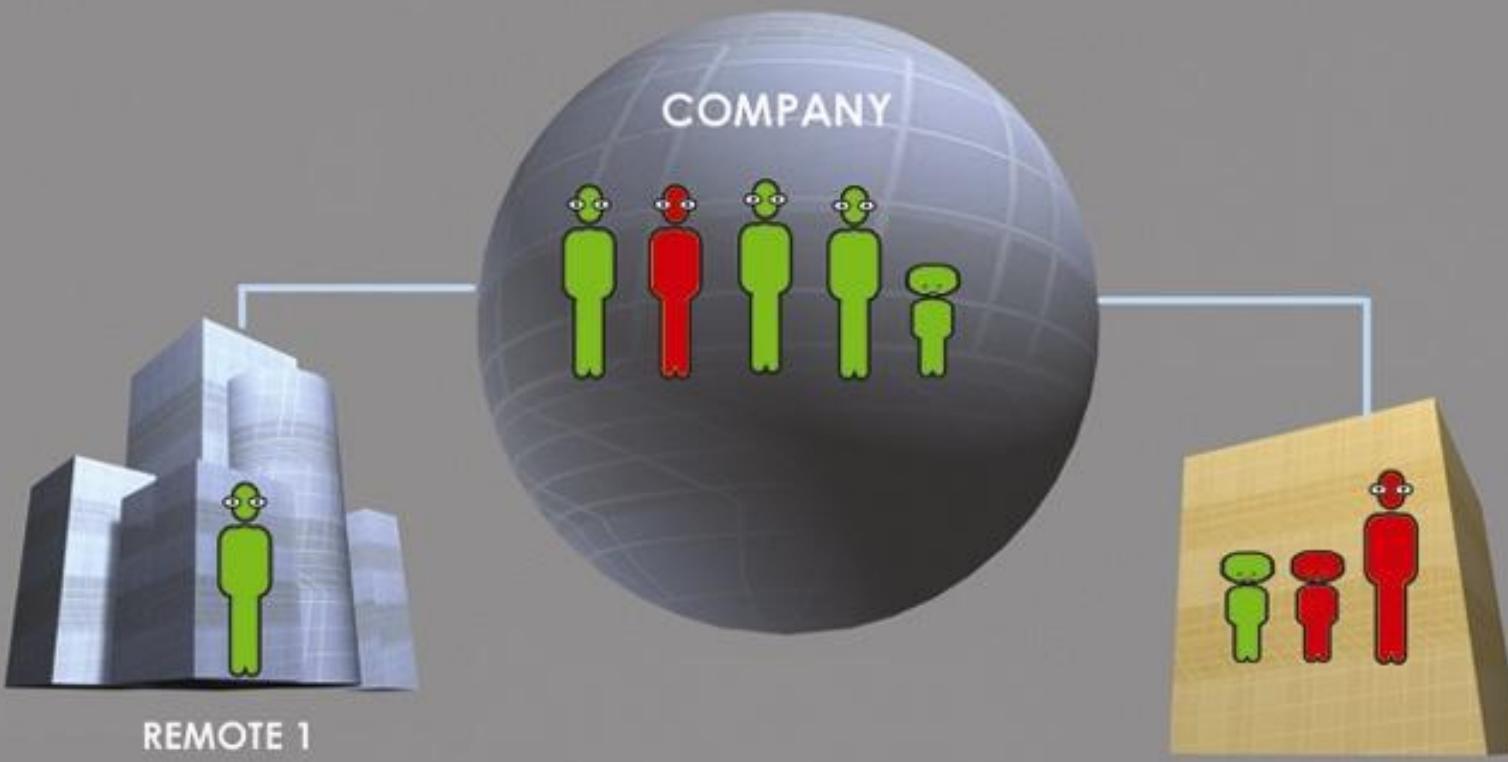
REMOTE 1

REMOTE 2

EMPLOYEE

OTHERS

SHARE

DO NOT SHARE

Real Scenarios from COE Review Preparation

COE email # 1:

If you didn't get a chance to attend yesterday's workshop, the content is available on this web page http://www.venturecapital.org/centers/Centers_seminar.swf.
You'll be prompted for a <u>User ID</u>: **Centers** and   <u>Password</u>: **Excellence**.

COE email # 2:

In order to streamline the process and to prevent unforseen glitches (Murphy's Law), **we recommend that you email your presentations** and I will load them on to the laptops.....however there is one small catch.....to do this, I will need to receive them no later than Monday, **<u>May 9th at 10:00am,</u>** otherwise please come prepared with your presentations on either a CD, or jump drive, or both.

User Problems

- Account or group creation needs IT staff   --- reduced productivity

- Passwords: share or record on sticky notes   --- security leaks

- Confidential files travel unencrypted by email   --- information leaks

- Email bounces at sender's or recipient's server   --- lost information or time

- Incoming large emails fill up email account   --- undeliverable message

- Use personal email (temp fix)   --- time waster, and breach

- Unprotected web posting of confidential files   --- confidentiality risk

- Attachments blocked by server antivirus/spam   --- lost information or time

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General State of IT Communications

- Frustration

- Lost productivity

- Security risk

- Information loss

RESULT: BIG investment, but not effective = LOW ROI

*"If you multiply the people in the world using intranets by minutes
they waste on them each day, it's approximately a $1 trillion problem."*
Jakob Nielsen, Nielsen Norman Group

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Email Attachments: IT Infrastructure Impact

Email server problems:

- not designed for file sharing
- slower backup than on file servers
- becomes a database issue

--- performance degradation
--- much longer back up time
--- more capital investment

IT Staff patches:

- extra mail server capacity
- extra backup systems
- set email attachment limits
- workarounds to allow users to post files over limits

"U.S. federal regulations created impetus behind email archiving,
and removing the email object and attachments but maintaining a link to it."
Ferris Research

CIX Solution Breakthroughs

- No account set up

- Authentication with secure links

- User specifies who has access

- File upload integrated with emailing the link

- Only recipients can download files when-wherever

- Users can view all files available to them

- Encrypted file upload and download with expiring link

The CIX Solution Results

Communication:

- immediate
- intuitive
- effective

Security:

- fewer weak links
- fewer information leaks
- reduced information loss

Cost Benefits:

- reduced IT staff involvement
- reduced operational cost

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CIX's Potential Customer Feedback

"With CIX's solution we could offer added value, including integrated mail and file services."

Xmission - Utah ISP

"We have to set up and deal with so many accounts: CIX's solution would save us a lot of time".

Parsons, Behle and Latimer - Utah Law Firm

"The CIX solution will solve problems for which the IT staff of any organization with email servers has no good remedies.

University of Utah –VPs Office, IT Manager

Intellectual Property

University of Utah Invention Disclosure: IDE 3850
"Generalized Authentication and Patronization System"

Provisional Patent being filed:
- Generalized Transport Authentication
- Generalized Resource Patronization
- Transport Identity File Permission
- Open File Communication System Architecture
- Open File Communication System User Interfaces

Copyrights and Trade Secrets:
- software
- user interfaces

Potential Products and Customers

- Email File Sharing System: *Corporations*

- Email File Sharing Technology: *Portals and ISPs*

Potential Business Models

- Software package licensed to Corporations (per seat per year)

- Web-based service sold to Corporations (per seat per month)

- Technology licensing to Portals or ISPs for integration in their solution

YEAR 1 of COE: verify customers and models above

Market Segments: Potential Benefits

All:
- reduced IT cost
- increased productivity
- decrease frustration

Corporations:
- facilitate collaboration, including external parties
- decrease security weak links, and information leaks or loss

ISPs:
- providing integrated email and file services to customers
- increase market share

Portals/ASPs:
- gain market share and paid customers with compelling features

Market Opportunity

US Workforce: 112M (2002 Census)

Over 90% of US workforce has access to email (Gartner, Forrester)

US corporate email users: 100M

Cost of CIX product per seat per year: $20-50

US Corporate Market opportunity: $2 – 5 Billion

Portal and ISP Market Opportunity will be evaluated in Year 1

Competitors

FEATURES	CIX	Xdrive	IBackup	intranets.com
Price (per year)	$20 - $50	$120	$120	$720
Storage space	5 GB	5 GB	5 GB	0.1 GB
No account set up	X			
Authentication by token	X			
Expiring authentication link	X			
File access control list	X	X		X
Control access by email	X			
Email link of uploaded file	X	X	X	
Download w/o account	X		X	
Shared file list w/o account	X			
File upload patronization	X			
Notify file recipient	X	X	X	
Encrypted file up/download	X	X	X	X
Expiring file link	X	X	X	
Upload multiple versions	X			
Encrypted text box	X			
Track who downloaded file	X			

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Pre-COE Milestones Accomplished

- Prototype completed

- Trial underway

- Preliminary focus groups

- Preliminary business strategy to be verified

- Vision and R&D strategy

Year 1 COE Objectives

- Prototype usability testing

- Develop scalable system architecture

- Detailed market research

- Product and market development strategy

- Seek potential partners and investors

- Form company

- Product version 1 launch

Technology and Commercialization PERC Chart

TECHNOLOGY DEVELOPMENT AND COMMERCIALIZATION — PLANNING SCHEDULE

July 2005

	Year −2	Year −1	Year 1	Year 2	Year 3	Year 4	Year 5
TECHNOLOGY							
concept							
research							
prototype development							
prototype testing							
product development							
BUSINESS							
IP protection							
market research							
seek partners - licensees							
company formation							
product marketing							
licensing							
product launch							

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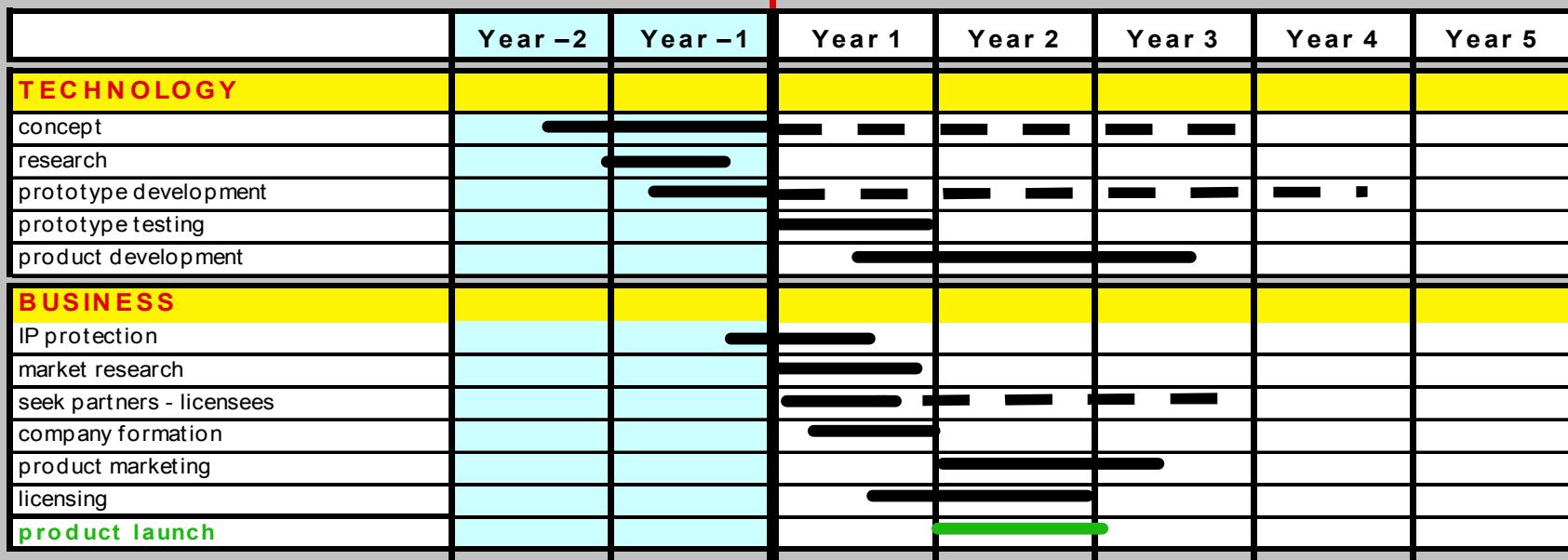
Budget

CIX	July 1,2005 - June 30, 2006	
		Year 1 proposed
Personnel		110,000
PI	Stefano Foresti	40,000
Research Associat	Luke Stebbing	40,000
Students	CS - Programming	10,000
Students	Architecture - User Interface	10,000
Students	MBA - market analysis	10,000
Equipment		0
		0
Consultants/Subcontracts		30,000
Consultants:	Dale Richards	20,000
Consultants:	market research	5,000
Consultants:	product development	5,000
General Expenses		20,000
Travel		15,000
Supplies, printing, promotional material		3,000
Other miscellaneous expenses		2,000
Grand Total		**160,000**

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Team

Stefano Foresti	CHPC	PI, R&D lead, strategy and business planning
Dale Richards	COE Consultant	project management and commercialization
Luke Stebbing	CHPC	R&D
Julio Facelli	CHPC	HPC systems team management
Julio Bermudez	Architecture	User Interface design
Rob Erbacher	CS, USU	computer security research
Ron Price	CHPC	software development
MBA Student	Business	market research
Student	CS	software programming
Student	Architecture	User Interface design

Expertise and Accomplishments

- International media portals
- ISP and Telco services
- Company startups

- Science, R&D, commercialization
- Interdisciplinary design
- Scalable systems + User Interfaces

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Questions?

R&D Roadmap

Multiple directions identified in:

• Technology and Scientific Research

• Product R&D and Strategy

Prioritization by:

• Market research

• Feedback from business partners

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